

**Rio Mesa Solar Electric Generating Facility (RMSEGF)
(11-AFC-4)**

Applicant's Specific Comments on the Preliminary Staff Assessment

EXECUTIVE SUMMARY

SPECIFIC COMMENTS

1. **Page 1.1-9 (Part A), Executive Summary Table 1:** Table 1 should be modified to reflect the scope of projects considered by staff in their cumulative impacts analyses in the PSA. CEQA Guidelines Section 15355 requires that the cumulative impacts of the project be assessed in relation to “closely related” past, present, and reasonably foreseeable future projects. The list of “Cumulative Projects” in the PSA contains many projects that are neither closely related to the RMS SEGF, nor considered by Staff in the vast majority of PSA sections. Many of these projects are far outside any natural resource boundary that is relevant to environmental analysis (i.e., outside the viewshed, noiseshed, or watershed of the project). In nearly every resource area, Staff considered cumulative impacts associated with projects within a six mile buffer. However, there are a few resource areas (e.g., Socioeconomics, Water Supply) where a broader geographic range is appropriate. Staff should focus its list of projects on those that are considered in the vast majority of the PSA chapters. However, if Staff intends to include this master list of projects, then Staff should clarify which resource areas the list applies to.
2. **Page 1.1-13 (Part A), Soil and Surface Water:** The discussion of soil and surface water resources should include a third bullet explaining how the technology employed by the Project affects the natural storm water regime of the Project site. The following suggested bullet is based on discussion of soil and surface water resources at pages 4.1-1, 11 and 18 of the PSA.
 - The solar field utilizes mirrors that are installed without requirements for concrete foundations. The heliostat field will not require extensive grading or removal of vegetation. As a result, development of the project would maintain original grades and natural drainage features across the majority of the project site without the need for added storm drainage control. Since the project would not significantly alter natural drainage courses, post-project flows leaving the project site will not be significantly different compared to pre-project conditions. The power blocks, substation, heliostat assembly buildings and administrative areas would be protected using diversion channels, bypass channels, or swales to direct run-on flow from up-slope areas and runoff flow through and around each plant, which would be designed to maintain peak flow rates similar to pre-project rates. As the original grades and natural drainage features would be maintained across the majority of the project site, thus requiring no added storm drainage control, the potential for impacts related to soil erosion, such as scour and sediment transport, will be minimized.
3. **Page 1.1-16 (Part A):** The Executive Summary should include a short discussion summarizing other key topics in the PSA. At a minimum, Applicant requests that staff include a discussion of Socioeconomics and the Project Description and Engineering Assessment, as follows:

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SOCIOECONOMICS

The project will not result in a significant impact to socioeconomic resources. The project will not induce substantial population growth, displace people or existing housing, or significantly increase the use of public facilities, parks, schools, or recreation facilities as a result of construction or operations. The project will not create a significant adverse direct, indirect, or cumulative impact to public services, such as police, fire, or emergency services.

The project will have several notable beneficial economic impacts as a result of construction and operation. The project will create an average of 840 construction jobs, with a peak of 2,188 jobs created during month 23 of construction. Construction of the project will also create additional indirect and induced employment to supply services and materials for construction of the project and as a result of increased household income and expenditures. An estimated \$71.4 million will be spent locally on construction materials, resulting in approximately \$5.5 million in total sales taxes from local sales during construction. The project will require 100 full-time jobs for operation and maintenance with an annual operations and maintenance payroll of \$12.3 million. This will create additional indirect and induced jobs in the local area to supply goods and services to the project, and provide services as a result of increased household income. Riverside County will generate property taxes of approximately \$4.3 million annually over the life of the project. Additionally, local purchases of materials, supplies, equipment, and services are expected to total approximately \$589,600 annually, resulting in approximately \$45,694 of annual sales tax revenue for Riverside County.

PROJECT DESCRIPTION AND ENGINEERING ASSESSMENT

The project will contain two solar plants and common facilities for water treatment, plant maintenance, Common HV Switchyard, control room and administrative offices. Each plant will have a nominal output capacity of 250-MW.

The heliostat (or mirror) fields collect and focus the sun's energy on the solar receiver steam generator (SRSG), or solar boiler, located atop a tower near the center of each of the heliostat arrays. The SRSG is the heart of the plant and the device that converts the sun's light energy to thermal energy (or Heat). Using the Sun's energy, the SRSG heats water and makes high pressure, superheated steam. From the SRSG, the steam is sent to the turbine generator, and power is generated using a conventional, Rankine Steam-Power cycle.

Each plant will consist of the following elements:

- One heliostat array comprising approximately 85,000 heliostats of LH-2.3 design
- One 750-foot tall SRSG tower
- One Rankine-cycle non-reheat steam turbine connected to the SRSG
- One auxiliary/startup natural gas-fired boiler, rated at 249 mmBtu/hr
- One natural gas-fired night-time preservation boiler, rated at 15 mmBtu/hr to maintain system steam seals and critical systems overnight
- One Air-Cooled Condenser for main steam cooling to minimize water usage
- Auxiliary equipment supporting the SRSG, Solar Field and turbine / generator at each plant:

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- Boiler Feedwater and Condensate Pumps
- Feedwater Heaters
- Deaerator
- Condensate Polisher
- Wet Surface Air Cooler (Wet-SAC) for critical support systems
- Transformers
- Emergency Diesel Generator
- Diesel engine and electric motor-driven fire pumps

The Rio Mesa SEGF will be interconnected to the SCE grid through the newly constructed Colorado River Substation. Power from Rio Mesa SEGF will be transmitted at 220-kV to the new substation along a common 10-mile approximate gen-tie line. The new substation is expected to be completed and operational in 2013. The project will be able to provide the utility grid stabilizing ancillary services such as VARs, inertial momentum, load following and gradual up/down ramping associated with a synchronous rotating generator. Since the system includes an auxiliary gas-fired boiler, each plant has the capability to use fuel gas to pre-heat the system pre-dawn and allow for solar operation earlier in the morning and later into the afternoon, as well as augment main steam production during transient periods (e.g., when a large cloud passes over the heliostat field).

3. **Page 1.1-13 (Part), Biological Resources:** The Applicant recommends that the Biological Resources section in the Executive Summary (Part B) be revised to be consistent with Applicant's comments on the Biological Resources section of the PSA.
4. **Page 1.1-19 (Part B), Cultural Resources** (Part B): The Applicant recommends that the Cultural Resources section in the Executive Summary (Part B) be revised to be consistent with Applicant's comments on the Cultural Resources section of the PSA.